Patent claims 1 to 18 (Article 34 Chapter II PCT)

1. Nucleic acid molecule of SEQ ID NO 1 or the sequence complementary thereto.

2. Nucleic acid molecule having a shortened sequence compared with a nucleic acid molecule according to claim 1, namely the sequence of the region or in the region of the nucleotide positions 12 to 131.

3. Nucleic acid molecule having a shortened sequence compared with a nucleic acid molecule according to claim 1, namely

(i) SEQ ID NO 3 or

(ii) SEQ ID NO 4 or

(iii) SEQ ID NO 5 or

(iv) the sequence complementary to each of (i), (ii) and (iii).

4. Nucleic acid molecule of SEQ ID NO 2 or the sequence complementary thereto.

5. Nucleic acid molecule ***characterised*** in that, in respect of its sequence in at least 10 successive nucleotides of its nucleotide chain,

(i) it is identical to a nucleic acid molecule according to one of the preceding claims or

(ii) it corresponds to a nucleic acid molecule according to one of the preceding claims in 9 out of 10 successive nucleotides or

(iii) it corresponds to a nucleic acid molecule according to one of the preceding claims in 8 out of 10 successive nucleotides or

[Stamp: Amended sheet]

(iv) it is at least 90 % homologous to a nucleic acid molecule according to one of the preceding claims, the nucleic acid molecule allowing the detection of bacteria of the *Pseudomonas* genus.

Sub C2

6. Nucleic acid molecule according to claim 5, ***characterised*** in that it is from 10 to 250, and preferably from 15 to 30, nucleotides long.

7. Nucleic acid molecule according to one of the preceding claims, ***characterised*** in that it is single-stranded or double-stranded.

8. Nucleic acid molecule according to one of the preceding claims, ***characterised*** in that it is present
(i) as DNA or
(ii) as RNA corresponding to (i) or
(iii) as PNA,
the nucleic acid molecule where appropriate having been modified in a manner known *per se* for analytical detection processes, especially those based on hybridisation and/or amplification.

Sub C3

9. Nucleic acid molecule according to claim 8, characterised in that the nucleic acid molecule has been modified in such a manner that up to 20 % of the nucleotides of at least 10 successive nucleotides of its nucleotide chain, especially 1 or 2 nucleotides, have been replaced by analogous "building blocks" known *per se* as probes and/or primers, especially by nucleotides that do not occur naturally in bacteria.

10. Nucleic acid molecule according to claim 8 ~~or 9,~~ ***characterised*** in that the nucleic acid molecule has been

[Stamp: Amended sheet]

modified or labelled or additionally modified or labelled in such a manner that it comprises, in a manner known *per se* for analytical detection processes, one or more radioactive groups, coloured groups, fluorescent groups, groups for immobilisation on a solid phase and/or groups for an indirect or direct reaction, especially for an enzymatic reaction, preferably using antibodies, antigens, enzymes and/or substances having an affinity for enzymes or enzyme complexes, and/or otherwise modifying or modified groups of nucleic-acid-like structure.

Sub C3

11. One or more nucleic acid molecules according to one of the preceding claims in the presence of optional auxiliary substances and in the form of a kit for analytical detection processes, especially for the detection of bacteria of the *Pseudomonas* genus.

12. Use of one or more nucleic acid molecules according to one of claims 1 to 10 or in the form of a kit according to claim 11 for detection of the presence or absence of bacteria belonging to a group of bacteria of the *Pseudomonas* genus.

13. Use according to claim 12, characterised in that the group of bacteria of the *Pseudomonas* genus includes various strains of *Pseudomonas aeruginosa* or is made up from those strains.

14. Use according to claim 13, characterised in that the group of bacteria of the *Pseudomonas* genus is composed exclusively of *Pseudomonas aeruginosa* strains.

[Stamp: Amended sheet]

15. Use according to one of claims 12 to 14, ***characterised*** in that nucleic acid hybridisation and/or nucleic acid amplification is/are carried out.

16. Use according to claim 15, ***characterised*** in that, as nucleic acid amplification, a polymerase chain reaction is carried out.

17. Use according to one of claims 12 to 16, ***characterised*** in that the detection is carried out by distinguishing the to-be-detected bacteria from not-to-be-detected bacteria on the basis of differences in the genomic DNA and/or RNA at at least one nucleotide position in the region of a nucleic acid molecule according to one of claims 1 to 10.

18. Use according to claim 17, ***characterised*** in that distinguishing is carried out on the basis of differences in the region of a nucleic acid molecule according to claim 1.

[Stamp: Amended sheet]